Safety Attribute Inspection (SAI) Data Collection Tool
5.1.8 Extended Range Operations with Two−Engine Airplanes (ETOPS) (OP)

ELEMENT SUMMARY INFORMATION

Purpose of This Element (Certificate Holder's responsibility):

- To ensure that the Certificate Holder provides safe and reliable operations in accordance with their approved ETOPS authorization.

Objective (FAA oversight responsibility):

- To determine if the Certificate Holder's Extended Range Operations with Two−Engine Airplanes (ETOPS) program meets all applicable requirements of the Federal Aviation Regulations and FAA policies.
- To determine if the Certificate Holder's Extended Range Operations with Two−Engine Airplanes (ETOPS) program incorporates the System Safety Attributes.
- To identify any shortfalls in the Certificate Holder's Extended Range Operations with Two−Engine Airplanes (ETOPS) program.

Specific Instructions:

- There are no specific regulatory requirements for ETOPS. ETOPS authorization is a deviation from 14 CFR 121.161(a). (Airplane limitations: Type of route)

SUPPLEMENTAL INFORMATION

Specific Regulatory Requirement(s) (SRRs):

- SRRs:
  119.33(a)(1)
  119.33(a)(2)
  119.33(a)(3)
  119.43(b)
  119.43(b)(1)
  119.43(b)(2)
  119.43(c)
  119.49
  119.49(a)
  119.49(b)
  119.5(f)(1)
  119.5(f)(2)
  121.135(a)(1)
  121.135(b)(1)

121.135(b)(19)
121.135(b)(2)
121.135(b)(21)
121.135(b)(3)
121.135(b)(5)
121.135(b)(6)
121.135(b)(7)
121.161(a)
121.383(a)(1)
121.383(a)(2)
121.383(a)(3)

Related CFR(s) & FAA Policy/Guidance:

- Related CFRs:
  Intentionally left blank

- FAA Policy/Guidance:
  FAA Order 8400.10, Volume 3, Chapter 1
  FAA Order 8400.10, Volume 3, Chapter 3
  FAA Order 8400.10, Volume 4, Chapter 1
  Advisory Circular 120−42A

SAI SECTION 1 − PROCEDURES ATTRIBUTE	
Objective: Procedures, instructions and information contained in Certificate Holder's manual are documented methods for accomplishing a process. Policies contained in the Certificate Holder's manual should establish the Certificate Holder's compliance posture. Policies may not be stand−alone statements but may be imbedded within procedures, instructions or information regarding a particular regulatory requirement. The questions in this section of the data collection tool are designed to assist the inspector in determining if the Certificate Holder's manual has documented or prescribed methods of accomplishing the process requirements that provide answers to the associated who, what, when, where and how type questions. This section of the data collection tool contains policy questions, procedural questions and instructional or informational questions pertaining to various types of Certificate Holder requirements such as actions, prohibitions or resources (i.e., personnel, facilities, equipment, technical data, etc.).	
Tasks	
To meet this objective, the inspector must accomplish the following tasks:	
1. Review the information listed in the Supplemental Information section of this data collection tool.	
2. Review the duties and responsibilities for management and other personnel identified by the Certificate Holder who accomplish the Extended Range Operations with Two−Engine Airplanes (ETOPS) program.	
3. Review the Certificate Holder's manual to ensure that it contains policies, procedures, instructions and information necessary for the Extended Range Operations with Two−Engine Airplanes (ETOPS) program.	
Questions	
To meet this objective, the inspector must answer the following questions:	
1. Does the Certificate Holder's manual content meet the specific regulatory and FAA policy requirements for an Extended Range Operations with Two−Engine Airplanes (ETOPS) program:	
1.1 Does the Certificate Holder's manual contain general policies for the Extended Range operations with Two−Engine Airplanes (ETOPS) program that comply with the specific regulatory requirements? SRRs: 119.5(f)(1); 119.5(f)(2); 119.33(a)(1); 119.33(a)(2); 119.33(a)(3); 121.135(b)(1); 121.135(b)(5); 121.135(b)(6); 121.135(b)(7); 121.135(b)(19); 121.135(b)(21); 121.161(a); 121.383(a)(1); 121.383(a)(2); 121.383(a)(3); 119.49(a); 119.49(b)	☐ Yes ☐ No, Explain
1.2 Does the Certificate Holder's manual cite the regulatory requirements listed in the Supplemental Information section of this SAI? SRRs: 121.135(b)(3)	☐ Yes ☐ No, Explain
1.3 Does the Certificate Holder's manual contain the duties and responsibilities for personnel who will accomplish the Extended Range Operations with Two−Engine Airplanes (ETOPS) program? SRRs: 121.135(b)(2)	☐ Yes ☐ No, Explain
1.4 Does the Certificate Holder's manual include instructions and information for personnel to meet the requirements of the Extended Range Operations with Two−Engine Airplanes (ETOPS) program? SRRs: 121.135(a)(1)	☐ Yes ☐ No, Explain
1.5 Does the Certificate Holder's manual include ETOPS crew duties regarding:	
1.5.1 En route flight procedures? SRRs: 121.135(b)(5)	☐ Yes

	☐ No, Explain
1.5.2 Navigation procedures? SRRs: 121.135(b)(5)	☐ Yes ☐ No, Explain
1.5.3 Communication procedures? SRRs: 121.135(b)(5)	☐ Yes ☐ No, Explain
1.5.4 Procedures for the dispatch, release, or continuance of a flight if any item of equipment required for the particular type of operation becomes inoperative or unserviceable en route? SRRs: 121.135(b)(5)	☐ Yes ☐ No, Explain
1.6 Regarding ETOPS, does the Certificate Holder's manual include:	
1.6.1 Pilot route qualification procedures? SRRs: 121.135(b)(21)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.6.2 Pilot airport qualification procedures? SRRs: 121.135(b)(21)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.6.3 Dispatcher route qualification procedures? SRRs: 121.135(b)(21)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.6.4 Dispatcher airport qualification procedures? SRRs: 121.135(b)(21)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.7 Does the Certificate Holder's manual contain the required references to, or excerpts from the appropriate operations specifications? SRRs: 119.43(b); C.055; B.042; D.086; 119.49 *Related Design JTI's:* 1. Check that the Certificate Holder has operations specifications for conducting flag ETOPS. *Sources:* 119.49(a) *Interfaces:* 4.2.9−op; 1.1.2−aw; 3.1.9−op; 3.1.4−op; 5.1.2−aw; 1.1.2−op; 3.1.3−op; 3.2.1−op; 4.3.2−op; 5.1.7−op; 5.1.6−op 2. Check that the Certificate Holder has operations specifications for conducting supplemental operations that grants authorization for ETOPS areas. *Sources:* 119.49(b)(6) 3. Check that the Certificate Holder has operations specifications for conducting supplemental operations that specify limitations for ETOPS routes. *Sources:* 119.49(b)(6) 4. Check that the Certificate Holder has operations specifications for conducting supplemental operations specifying limitations for ETOPS areas. *Sources:* 119.49(b)(6)	☐ Yes ☐ No, Explain

	5. Check that the Certificate Holder has operations specifications for conducting flag operations for each kind of ETOPS authorized. *Sources:* 119.49(a)(5) *Interfaces:* 4.3.2−op; 5.1.6−op; 1.1.2−aw; 3.2.1−op; 1.1.2−op; 3.1.4−op; 5.1.2−aw; 5.1.7−op; 3.1.9−op; 3.1.3−op; 4.2.9−op 6. Check that the Certificate Holder has operations specifications for conducting flag operations containing authorization for ETOPS routes. *Sources:* 119.49(a)(6) *Interfaces:* 5.1.6−op; 5.1.7−op; 1.1.2−op; 3.2.1−op; 4.3.2−op; 4.2.9−op; 3.1.9−op; 1.1.2−aw; 3.1.4−op; 5.1.2−aw; 3.1.3−op 7. Check that the Certificate Holder has operations specifications for conducting flag operations that specify limitations for ETOPS areas. *Sources:* 119.49(a)(6) 8. Check that the Certificate Holder has operations specifications for conducting flag operations specifying limitations for ETOPS routes. *Sources:* 119.49(a)(6) 9. Check that the Certificate Holder has operations specifications for conducting flag operations specifying limitations for ETOPS areas. *Sources:* 119.49(a)(6) *Interfaces:* 5.1.7−op; 3.2.1−op; 5.1.6−op; 1.1.2−aw; 4.3.2−op; 4.2.9−op; 3.1.3−op; 3.1.9−op; 3.1.4−op; 5.1.2−aw; 1.1.2−op 10. Check that the Certificate Holder has operations specifications for conducting supplemental ETOPS. *Sources:* 119.49(b)(1) 11. Check that the Certificate Holder has operations specifications for conducting supplemental operations for each kind of ETOPS authorized. *Sources:* 119.49(b)(5) *Interfaces:* 1.1.2−aw; 4.2.9−op; 3.1.9−op; 5.1.2−aw; 3.1.4−op; 1.1.2−op; 3.1.3−op; 4.3.2−op; 5.1.7−op; 3.2.1−op; 5.1.6−op 12. Check that the Certificate Holder has operations specifications for conducting supplemental operations that grants authorization for ETOPS routes. *Sources:* 119.49(b)(6) *Interfaces:* 4.3.2−op; 3.2.1−op; 1.1.2−aw; 3.1.4−op; 5.1.6−op; 4.2.9−op; 5.1.2−aw; 1.1.2−op; 3.1.9−op; 3.1.3−op; 5.1.7−op	
1.8	If the Certificate Holder's manual includes excerpts from its operations specifications, are the excerpts clearly identified as part of the operations specifications? SRRs: 119.43(b)(1); C.055; B.042; D.086	☐ Yes ☐ No, Explain ☐ Not Applicable

1.9 Does the Certificate Holder's manual require compliance with appropriate operations specifications? SRRs: 119.43(b)(2); C.055; B.042; D.086	☐ Yes ☐ No, Explain
1.10 Does the Certificate Holder's manual contain a method for keeping all persons engaged in its operations informed of the provisions of the appropriate operations specifications? SRRs: 119.43(c); C.055; B.042; D.086	☐ Yes ☐ No, Explain
1.11 Does the Certificate Holder's Extended Range Operations with Two−Engine Airplanes (ETOPS) program comply with the guidance contained in FAA Order 8400.10? *Related Design JTI's:* 1. Check that the Part 121 Certificate Holder has an evaluation for Extended Range Operations with Two−Engine Airplanes (ETOPS), with maximum diversion times in excess of 75 minutes. *Sources:* 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042a *Interfaces:* 1.1.2−op; 1.1.2−aw; 3.1.9−op 2. Check that the Part 121 Certificate Holder has approval for Extended Range Operations with Two−Engine Airplanes (ETOPS), with maximum diversion times in excess of 75 minutes. *Sources:* 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042a 3. Check that the Part 121 Certificate Holder has approval for all ER−OPS with maximum diversion times in excess of 75 minutes, when the airplane/engine combination to be used is type design approved for the extended range operation proposed. *Sources:* 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042a(1) *Interfaces:* 1.1.2−aw; 1.1.2−op; 3.1.9−op 4. Check that the Part 121 Certificate Holder has approval for all ER−OPS with maximum diversion times in excess of 75 minutes, when the ER−OPS flight operation programs meets or exceeds AC 120−42 criteria. *Sources:* 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042a(2) *Interfaces:* 1.1.2−op; 3.2.1−op; 4.3.2−op; 5.1.7−op; 4.2.9−op; 5.1.6−op; 1.1.2−aw; 3.1.9−op; 3.1.4−op; 5.1.2−aw; 3.1.3−op 5. Check that the Part 121 Certificate Holder has approval and Regional concurrence, for all ER−OPS with maximum diversion times in excess of 75 minutes. *Sources:* 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042a(3) 6. Check that the Part 121 Certificate Holder has an evaluation for extended range operations with maximum diversion times of 75 minutes or less. *Sources:* 8400−10, Volume 3, Chapter 1, Section 4, Part B b.042b *Interfaces:* 4.3.2−op; 4.2.9−op; 3.1.9−op; 1.1.2−aw; 5.1.2−aw; 3.1.4−op; 3.1.3−op; 1.1.2−op; 5.1.6−op; 5.1.7−op; 3.2.1−op 7. Check that the Part 121 Certificate Holder has approval for extended range operations with maximum diversion times of 75 minutes or less.	☐ Yes ☐ No, Explain

Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B b.042b
Interfaces: 5.1.7−op; 4.3.2−op; 5.1.6−op; 1.1.2−aw; 3.2.1−op; 5.1.2−aw; 3.1.3−op; 4.2.9−op; 3.1.9−op; 1.1.2−op; 3.1.4−op

8. Check that the Part 121 Certificate Holder has airplanes whose design must be reviewed to identify any special equipment necessary to safely conduct ER−OPS of 75 minutes or less.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B b.042b
Interfaces: 1.1.2−op; 1.1.2−aw
9. Check that the Part 121 Certificate Holder has airplanes whose design must be reviewed to identify any special requirements necessary to safely conduct ER−OPS of 75 minutes or less.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B b.042b
Interfaces: 1.1.2−aw; 3.1.9−op; 1.1.2−op
10. Check that the Part 121 Certificate Holder has approval, in accordance with AC 120−42, ETOPS for ER−OPS of 75 minutes or less.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B b.042b
Interfaces: 4.3.2−op; 1.1.2−aw; 3.2.1−op; 5.1.6−op; 5.1.7−op; 3.1.4−op; 5.1.2−aw; 3.1.3−op; 1.1.2−op; 4.2.9−op; 3.1.9−op
11. Check that the Part 121 Certificate Holder has approval on a case−by−case basis for operations in the Western Pacific.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B b.042b
Interfaces: 1.1.2−op; 3.2.1−op; 4.3.2−op; 5.1.7−op; 4.2.9−op; 5.1.6−op; 3.1.9−op; 3.1.4−op; 1.1.2−aw; 5.1.2−aw; 3.1.3−op
12. Check that the Part 121 Certificate Holder has approval on a case−by−case basis for operations in the Western Pacific considering the performance of the airplane to be used.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B b.042b
Interfaces: 3.1.4−op; 5.1.2−aw; 5.1.7−op; 3.1.3−op; 1.1.2−op; 4.2.9−op; 3.1.9−op; 4.3.2−op; 3.2.1−op; 5.1.6−op; 1.1.2−aw
13. Check that the Part 121 Certificate Holder has approval on a case−by−case basis for operations in the Western Pacific considering the character of the terrain.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B b.042b
Interfaces: 4.2.9−op; 3.1.9−op; 1.1.2−aw; 3.1.4−op; 5.1.2−aw; 3.1.3−op; 1.1.2−op; 5.1.6−op; 5.1.7−op; 4.3.2−op; 3.2.1−op
14. Check that the Part 121 Certificate Holder has approval on a case−by−case basis for operations in the Western Pacific considering the performance of the airplane to be used.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B b.042b
Interfaces: 3.1.9−op
15. Check that the Part 121 Certificate Holder has approval on a case−by−case basis for operations in the Western Pacific considering the capabilities of the alternate airports being used.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B b.042b
Interfaces: 5.1.6−op
16. Check that the Part 121 Certificate Holder has approval on a case−by−case basis for operations in the Western Pacific considering the special provision for this area in the operations specifications.

Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B b.042b
Interfaces: 5.1.6−op

17. Check that the Part 121 Certificate Holder has approval on a case−by−case basis for operations in the Caribbean Sea.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B b.042b
Interfaces: 5.1.6−op
18. Check that the Part 121 Certificate Holder has approval on a case−by−case basis for operations in the Caribbean Sea considering the reliability of the propulsion system.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B b.042b
Interfaces: 1.1.2−op; 1.1.2−aw
19. Check that the Part 121 Certificate Holder has approval on a case−by−case basis for operations in the Caribbean Sea considering the character of the terrain.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B b.042b
Interfaces: 5.1.7−op; 5.1.6−op; 3.2.1−op
20. Check that the Part 121 Certificate Holder has approval on a case−by−case basis for operations in the Caribbean Sea considering the performance of the airplane to be used.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B b.042b
Interfaces: 3.1.9−op
21. Check that the Part 121 Certificate Holder has approval on a case−by−case basis for operations in the Caribbean Sea considering the capabilities of the alternate airports being used.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B b.042b
Interfaces: 5.1.6−op
22. Check that the Part 121 Certificate Holder has approval on a case−by−case basis for operations in the Caribbean Sea considering the special provision for this area in the operations specifications.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B b.042b
Interfaces: 3.1.3−op; 5.1.7−op; 5.1.6−op; 1.1.2−op; 3.2.1−op; 3.1.4−op; 4.2.9−op; 4.3.2−op; 3.1.9−op; 1.1.2−aw; 5.1.2−aw
23. Check that the Part 121 Certificate Holder has operations specifications approval for ER−OPS with a diversion time of 75 minutes or less.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B b.042b
Interfaces: 5.1.2−aw; 4.2.9−op; 3.1.3−op; 3.1.9−op; 3.1.4−op; 1.1.2−op; 5.1.7−op; 5.1.6−op; 3.2.1−op; 1.1.2−aw; 4.3.2−op
24. Check that the Part 121 Certificate Holder has a general ER−OPS authorization in the operations specifications for operations in the Western Atlantic.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042c
Interfaces: 5.1.6−op; 5.1.7−op
25. Check that the Part 121 Certificate Holder has a general ER−OPS authorization in the operations specifications for operations in the Caribbean Sea.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042c
Interfaces: 5.1.6−op; 5.1.7−op
26.

Check that the Part 121 Certificate Holder has a general ER−OPS authorization in the operations specifications.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042d
Interfaces: 5.1.7−op; 5.1.6−op

27. Check that the Part 121 Certificate Holder has enroute alternate airports that have been specified in the operations specifications.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042e
Interfaces: 5.1.2−aw; 3.2.1−op; 5.1.6−op
28. Check that the Part 121 Certificate Holder has enroute alternate airports that meet the enroute alternate criteria in AC−120−42 for use in ER−OPS operations.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042e
Interfaces: 5.1.6−op; 3.2.1−op; 5.1.2−aw
29. Check that the Part 121 Certificate Holder has authorization to conduct special ER−OPS in the Western Atlantic using a maximum diversion time of 75 minutes or less.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042f
Interfaces: 5.1.7−op; 5.1.6−op; 1.1.2−op; 3.1.3−op; 3.1.4−op; 3.2.1−op; 4.3.2−op; 4.2.9−op; 3.1.9−op; 5.1.2−aw; 1.1.2−aw
30. Check that the Part 121 Certificate Holder has ER−OPS operations that are approved for the Western Pacific and are listed in the operations specifications by make and any special equipment.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042f
Interfaces: 1.1.2−aw; 1.1.2−op
31. Check that the Part 121 Certificate Holder has ER−OPS operations that are approved for the Western Pacific and are listed in the operations specifications by model and any special equipment.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042f
Interfaces: 1.1.2−op; 1.1.2−aw
32. Check that the Part 121 Certificate Holder has ER−OPS operations that are approved for the Western Pacific and are listed in the operations specifications by make and any special limitations.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042f
Interfaces: 1.1.2−op; 1.1.2−aw
33. Check that the Part 121 Certificate Holder has ER−OPS operations that are approved for the Western Pacific and are listed in the operations specifications by model and any special limitations.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042f
Interfaces: 1.1.2−aw; 1.1.2−op
34. Check that the Part 121 Certificate Holder has authorization to conduct special ER−OPS in the Caribbean Sea using a maximum diversion time of 75 minutes or less.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042f
Interfaces: 4.3.2−op; 1.1.2−aw; 3.2.1−op; 3.1.4−op; 5.1.7−op; 3.1.3−op; 5.1.6−op; 5.1.2−aw; 4.2.9−op; 1.1.2−op; 3.1.9−op
35. Check that the Part 121 Certificate Holder has ER−OPS operations that are approved for the Caribbean Sea and are listed in the operations specifications by make and any special equipment.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042f
Interfaces: 5.1.6−op; 5.1.7−op

36. Check that the Part 121 Certificate Holder has ER−OPS operations that are approved for the Caribbean Sea and are listed in the operations specifications by model and any special equipment.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042f
Interfaces: 5.1.7−op; 5.1.6−op
37. Check that the Part 121 Certificate Holder has ER−OPS operations that are approved for the Caribbean Sea and are listed in the operations specifications by make and any special limitations.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042f
Interfaces: 5.1.7−op; 5.1.6−op
38. Check that the Part 121 Certificate Holder has ER−OPS operations that are approved for the Caribbean Sea and are listed in the operations specifications by model and any special limitations.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042f
Interfaces: 5.1.6−op; 5.1.7−op
39. Check that the Part 121 Certificate Holder has been issued operations specifications that involve operations in the Central East Pacific (CEP) airspace.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042g
40. Check that the Part 121 Certificate Holder has been issued operations specifications that involve operations in the North Pacific (NOPAC) airspace.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042g
41. Check that the Part 121 Certificate Holder has operations specifications that involves operations in the North Atlantic Minimum Navigation Performance Specifications (NAT/MNPS) airspace.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042g
Interfaces: 5.1.6−op; 5.1.7−op
42. Check that the Part 121 Certificate Holder has operations specifications that involve operations in the areas of magnetic unreliability.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042g
Interfaces: 5.1.7−op; 5.1.6−op
43. Check that the Part 121 Certificate Holder has operations specifications if the operator is authorized to use fuel reserves in ER−OPS.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042g
Interfaces: 3.2.2−op
44. Check that the Part 121 Certificate Holder has operations specifications if the operation involves transatlantic flight in the North Atlantic.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042g
Interfaces: 5.1.6−op; 5.1.7−op
45. Check that the Part 121 Certificate Holder has been issued operations specifications B041 if the operation involves transatlantic flight in the North Atlantic.
Sources: 8400−10, Volume 3, Chapter 1, Section 4, Part B B.042g
Interfaces: 5.1.7−op; 5.1.6−op
46. Check that the Part 121 Certificate Holder has been issued operations specifications C055 that includes Extended Range

Operations (ER−OPS). *Sources:* 8400−10, Volume 3, Chapter 3 Section 5, Part B C.055 *Interfaces:* 5.1.2−aw; 3.1.3−op; 3.1.4−op; 4.2.9−op; 1.1.2−op; 3.1.9−op; 5.1.6−op; 5.1.7−op; 3.2.1−op; 4.3.2−op; 1.1.2−aw 47. Check that the Part 121 Certificate Holder has ETOPS operations within the former Soviet Union. *Sources:* 8400−10, Vol. 4, Chapter 1, Section 5, 223 *Interfaces:* 5.1.6−op; 5.1.7−op	
1.12 Does the Certificate Holder's Extended Range Operations with Two−Engine Airplanes (ETOPS) program comply with the guidance contained in Advisory Circular 120−42? *Related Design JTI's:* 1. Check that the Part 121 Certificate Holder has extended range operations that contain a point further than one hour flying time at the approved one−engine inoperative cruise speed (under standard conditions in still air) from an adequate airport. *Sources:* AC−120−42a, 4(e) *Interfaces:* 5.1.6−op; 5.1.7−op 2. Check that the Part 121 Certificate Holder has extended range operations that has an outbound entry point which is one hour flying time at the approved one−engine inoperative cruise speed (under standard conditions in still air) from an adequate airport. *Sources:* AC−120−42a, 4(f) *Interfaces:* 5.1.7−op; 5.1.6−op 3. Check that the Part 121 Certificate Holder has an evaluation considering the continuing operational concepts outlined in paragraph 10 of AC−120−42a *Sources:* AC−120−42a, 5 4. Check that the Part 121 Certificate Holder has ETOPS operations that are not limited to over water operations. *Sources:* AC−120−42a, 5c(1) *Interfaces:* 5.1.7−op; 5.1.6−op 5. Check that the Part 121 Certificate Holder has additional restrictions imposed on their ETOPS operations. *Sources:* AC−120−42a, 5c(2) *Interfaces:* 5.1.7−op; 5.1.6−op 6. Check that the Part 121 Certificate Holder has deviations granted to operate their ETOPS operations in excess of the basic requirements. *Sources:* AC−120−42a, 5c(2) *Interfaces:* 5.1.7−op; 5.1.6−op 7. Check that the Part 121 Certificate Holder has airports that are adequate for the airplane used. *Sources:* AC−120−42a, 5c(3) *Interfaces:* 5.1.6−op 8. Check that the Part 121 Certificate Holder has a deviation from the required time restriction. *Sources:* AC−120−42a, 5c(4) *Interfaces:* 5.1.6−op; 5.1.7−op	☐ Yes ☐ No, Explain

9. Check that the Part 121 Certificate Holder has made an assessment to ensure that exceptional piloting skills are not required during its extended range operations.
Sources: AC−120−42a, 5e
Interfaces: 4.2.3−op; 3.1.3−op; 4.2.9−op
10. Check that the Part 121 Certificate Holder has made an assessment to ensure that exceptional crew coordination are not required during its extended range operations.
Sources: AC−120−42a, 5e
11. Check that the Part 121 Certificate Holder has trained its personnel to achieve competence in extended range operations.
Sources: AC−120−42a, f(3)
Interfaces: 4.2.5−op; 4.2.7−op; 4.3.2−op; 4.3.1−op
12. Check that the Part 121 Certificate Holder has authorization in their operations specifications for extended range operations within an area where the diversion time at any point along the proposed route of flight to an adequate airport is 75 minutes at the approved one−engine cruise speed (under standard conditions in still air).
Sources: AC 120−42a, 10 f(1)(i)
Interfaces: 1.1.2−op; 3.2.1−op; 4.3.2−op; 5.1.7−op; 5.1.6−op; 1.1.2−aw; 5.1.2−aw; 3.1.4−op; 3.1.3−op; 4.2.9−op; 3.1.9−op
13. Check that the Part 121 Certificate Holder has authorization in their operations specifications for extended range operations within an area where the diversion time at any point along the proposed route of flight to an adequate airport is 120 minutes at the approved one−engine cruise speed (under standard conditions in still air).
Sources: AC 120−42a, 10 f(1)(i)
Interfaces: 3.2.1−op; 5.1.2−aw; 3.1.4−op; 3.1.3−op; 5.1.6−op; 5.1.7−op; 1.1.2−op; 4.2.9−op; 3.1.9−op; 1.1.2−aw; 4.3.2−op
14. Check that the Part 121 Certificate Holder has authorization in their operations specifications for extended range operations within an area where the diversion time at any point along the proposed route of flight to an adequate airport is 180 minutes at the approved one−engine cruise speed (under standard conditions in still air).
Sources: AC 120−42a, 10 f(1)(i)
Interfaces: 3.1.4−op; 5.1.2−aw; 5.1.7−op; 3.1.3−op; 5.1.6−op; 4.2.9−op; 3.1.9−op; 1.1.2−op; 1.1.2−aw; 3.2.1−op; 4.3.2−op
15. Check that the Part 121 Certificate Holder has approval in the operations specifications for the authorized areas used in ETOPS.
Sources: AC 120−42a, 10 f(1)(ii)
Interfaces: 4.3.2−op; 5.1.7−op; 5.1.6−op; 1.1.2−aw; 3.2.1−op; 4.2.9−op; 3.1.4−op; 3.1.9−op; 1.1.2−op; 5.1.2−aw; 3.1.3−op
16. Check that the Part 121 Certificate Holder does not have a policy that would prejudice the final authority of the pilot in command.
Sources: AC 120−42a, 10 f(3)
Interfaces: 3.1.9−op; 4.3.2−op; 1.1.2−aw; 5.1.2−aw; 3.1.4−op; 3.1.3−op; 1.1.2−op; 3.2.1−op; 5.1.6−op; 5.1.7−op; 4.2.9−op
17. Check that the Part 121 Certificate Holder does not have a policy that would prejudice the final responsibility of the pilot in command.
Sources: AC 120−42a, 10 f(3)

18. Check that the Part 121 Certificate Holder has, in its operations specifications, provisions covering the minimum altitudes to be flown along planned routes.
Sources: AC 120−42a, 10 g(2)(iii)
Interfaces: 3.1.3−op; 5.1.7−op; 5.1.6−op; 1.1.2−op; 3.2.1−op; 3.1.4−op; 4.3.2−op; 4.2.9−op; 3.1.9−op; 1.1.2−aw; 5.1.2−aw
19. Check that the Part 121 Certificate Holder has, in its operations specifications, provisions covering the minimum altitudes to be flown along diversionary routes.
Sources: AC 120−42a, 10 g(2)(iii)
Interfaces: 1.1.2−op; 3.2.1−op; 4.3.2−op; 5.1.6−op; 1.1.2−aw; 5.1.7−op; 3.1.9−op; 5.1.2−aw; 4.2.9−op; 3.1.4−op; 3.1.3−op
20. Check that the Part 121 Certificate Holder has, in its operations specifications, provisions that preclude operations in excess of the maximum diversion time at any point in route to a suitable airport for landing.
Sources: AC 120−42a, 10 g(2)(iv)
Interfaces: 1.1.2−aw; 4.2.9−op; 3.1.9−op; 3.1.4−op; 5.1.2−aw; 3.1.3−op; 1.1.2−op; 5.1.7−op; 4.3.2−op; 3.2.1−op; 5.1.6−op
21. Check that the Part 121 Certificate Holder has, in its operations specifications, provisions covering airports authorized for use, including alternates, and associated instrument approaches and operating minima.
Sources: AC 120−42a, 10 g(2)(v)
Interfaces: 4.3.2−op; 5.1.6−op; 1.1.2−aw; 3.2.1−op; 5.1.2−aw; 3.1.4−op; 3.1.3−op; 5.1.7−op; 4.2.9−op; 3.1.9−op; 1.1.2−op
22. Check that the Part 121 Certificate Holder has, in its operations specifications, provisions covering the identification of those airplanes designated for extended range operation by make and model as well as serial and registration numbers.
Sources: AC 120−42a, 10 g(2)(vii)
Interfaces: 5.1.6−op; 5.1.7−op; 3.1.3−op; 3.2.1−op; 1.1.2−op; 4.2.9−op; 4.3.2−op; 3.1.9−op; 1.1.2−aw; 3.1.4−op; 5.1.2−aw
23. Check that the Part 121 Certificate Holder has a document showing that a FAA−witnessed validation flight has been accomplished using the specified airframe−engine combination.
Sources: AC 120−42a, 10 h
24. Check that the Part 121 Certificate Holder utilizes AC 120−42a, Appendix 3 for the definitions dealing with suitable enroute alternate airports.
Sources: AC 120−42A; Appendix 3
25. Check that the Part 121 Certificate Holder utilizes AC 120−42a, Appendix 5 for the definitions dealing with ETOPS operational program criteria.
Sources: AC 120−42a; Appendix 5

SAI SECTION 1 − PROCEDURES ATTRIBUTE −Drop Down Menu
1. No procedures, policy, instructions or information specified.
2. Procedures or instructions and information do not identify (who, what, when, where, how).
3. Procedures, policy or instructions and information do not comply with CFR.
4. Procedures, policy or instructions and information do not comply with FAA policy and guidance.
5. Procedures, policy or instructions and information do not comply with other documentation (e.g., manufacturer's data, Jeppesen's Charts, etc.).
6. Procedures, policy or instructions and information unclear or incomplete.
7. Documentation quality (e.g., unreadable or illegible).
8. Procedures, policy or instructions and information inconsistent across Certificate Holder manuals (FOM − Flight Operations Manual to GMM − General Maintenance Manual, etc.).
9. Procedures, policy or instructions and information inconsistent across media (e.g., paper, microfiche, electronic).
10. Resource requirements incomplete (personnel, facilities, equipment, technical data).
11. Other.

SAI SECTION 2 − CONTROLS ATTRIBUTE	
Objective: Controls are checks and restraints designed into a process to ensure a desired result. The questions in this section of the data collection tool are designed to assist the inspector in determining if checks and restraints are designed into the process to ensure the desired result is achieved. Controls should be written into the manual system to ensure that the most important manual policies, procedures or instructions and information will be complied with. Controls may be in the form of "administrative controls" which are secondary or supplemental written procedures. Like written procedures, administrative controls also need to provide answers to the associated who, what, when, where and how type questions. Controls may also be in the form of "engineered controls" such as automated features or mechanical actions or devices (i.e., safety devices, warning devices, etc.).	
Tasks	
To meet this objective, the inspector must accomplish the following tasks:	
1. Review the control questions below.	
2. Review the Certificate Holder's policies, procedures, instructions and information to gain an understanding of the controls that it has documented.	
Questions	
To meet this objective, the inspector must answer the following questions:	
2. Are the following controls built into the Extended Range Operations with Two−Engine Airplanes (ETOPS) program:	
2.1 Is there a control in place to ensure that the en route alternate criteria are met for ETOPS?	☐ Yes ☐ No, Explain
2.2 Is there a control in place to ensure that crewmembers are qualified in the Certificate Holder's ETOPS operations?	☐ Yes ☐ No, Explain
2.3 Is there a control in place to ensure that all airports used in ETOPS have safe conditions and adequate ground equipment?	☐ Yes ☐ No, Explain
2.4 Is there a control in place to ensure that only airplanes listed in operations specifications D086 be used in ETOPS operations?	☐ Yes ☐ No, Explain
2.5 Does the Certificate Holder have a documented method for assessing the impact of any changes made to the controls in the Extended Range Operations with Two−Engine Airplanes (ETOPS) program?	☐ Yes ☐ No, Explain

SAI SECTION 2 − CONTROLS ATTRIBUTE −Drop Down Menu
1. No controls specified.
2. Documentation for the controls do not identify (who, what, when, where, how).
3. Controls incomplete.
4. Controls could be circumvented.
5. Controls could be unenforceable.
6. Resource requirements incomplete (personnel, facilities, equipment, technical data).
7. Other.

SAI SECTION 3 − PROCESS MEASUREMENT ATTRIBUTE	
Objective: Process measurements are used by the Certificate Holder to measure and assess its processes to identify and correct problems or potential problems and to make improvements to the processes. The questions in this section of the data collection tool are designed to assist the inspector in determining if the Certificate Holder measures or assesses information to identify, analyze and document potential problems with the process. Process measurements are basically a Certificate Holder's internal evaluation or auditing of the most important policies, procedures or instructions and information associated with an element. To prevent the duplication of work that would otherwise occur, Process Measurements are most commonly addressed through a combination of auditing features contained in both the Certificate Holder's Safety Program/Internal Evaluation Program (for Operations and Cabin Safety related issues) and the auditing function of the Continuous Analysis &Surveillance System (for Airworthiness or Maintenance/Inspection related issues). The Director of Safety and the Quality Assurance Department often work in conjunction to accomplish this function for the Certificate Holder. This approach simply requires amendment of the Safety Program/Internal Evaluation Program audit forms or checklists and the Continuous Analysis &Surveillance System audit forms or checklists to include the specific process measurements for each element.	
Tasks	
To meet this objective, the inspector must accomplish the following tasks:	
1. Review the process measurement questions below.	
2. Review the Certificate Holder's policies, procedures, instructions and information to gain an understanding of the process measurements that it has documented.	
Questions	
To meet this objective, the inspector must answer the following questions:	
3. Does the Certificate Holder's Extended Range Operations with Two−Engine Airplanes (ETOPS) program include the following process measurements:	
3.1 Process measurements that would reveal if en route alternate criteria were not met for ETOPS?	☐ Yes ☐ No, Explain
3.2 Process measurements that would reveal if personnel were not properly qualified in ETOPS operations?	☐ Yes ☐ No, Explain
3.3 Process measurements that would reveal if all airports used in ETOPS did not have safe conditions and adequate ground equipment?	☐ Yes ☐ No, Explain
3.4 Process measurements that would reveal if an airplane not listed in operations specifications D086 was used in ETOPS operations?	☐ Yes ☐ No, Explain
3.5 Does the Certificate Holder document its process measurement methods and results?	☐ Yes ☐ No, Explain
3.6 Does the organization that conducts the process measurements have direct access to the person with responsibility for the Extended Range Operations with Two−Engine Airplanes (ETOPS) program?	☐ Yes ☐ No, Explain

SAI SECTION 3 − PROCESS MEASUREMENT ATTRIBUTE −Drop Down Menu
1. No process measurements specified.
2. Documentation for the process measurements does not identify (who, what, when, where, how).
3. Inability to identify negative findings.
4. No provisions for implementing corrective actions.
5. Ineffective follow−up to determine effectiveness of corrective actions.
6. Resources requirements (personnel, facilities, equipment, technical data).
7. Other.

SAI SECTION 4 − INTERFACES ATTRIBUTE	
Objective: Interfaces are used by the Certificate Holder to identify and manage the interactions between processes. The questions in this section of the data collection tool are designed to assist the inspector in determining whether or not interactions between the procedures, policies or instructions and information associated with other independent processes within the Certificate Holder's organization are documented. Written procedures, policies or instructions and information that are interrelated and located in different manuals within the Certificate Holder's manual system need to be consistent and complement each other. For the interfaces to be effectively managed, it is not only important to identify what the interfaces are, but it is imperative to document the specific location of the interfaces within the Certificate Holder's manual system.	
Tasks	
To meet this objective, the inspector must accomplish the following tasks:	
1. Review the interfaces associated with the Extended Range Operations with Two−Engine Airplanes (ETOPS) program that have been identified along with the individual questions in the Procedures Section (1) of this data collection tool.	
2. Review the Certificate Holder's policies, procedures, instructions and information to gain an understanding of the interfaces that it has documented.	
Questions	
To meet this objective, the inspector must answer the following questions: NOTE: ALL EXPLANATIONS IN THE DROP DOWN MENU FOR "NO" ANSWERS MUST INCLUDE THE INDIVIDUAL QUESTION NUMBER FROM THE PROCEDURES SECTION (1) OF THIS DATA COLLECTION TOOL AND THE ELEMENT NUMBER(S) OF THE INTERFACE(S) THAT WERE NOT ADDRESSED.	
4. Does the Certificate Holder's manual:	
4.1 Properly address the interfaces that are identified along with the individual questions in the Procedures Section (1)?	☐ Yes ☐ No, Explain
4.2 Document a method for assessing the impact of any changes to the associated interfaces within the Extended Range Operations with Two−Engine Airplanes (ETOPS) program?	☐ Yes ☐ No, Explain
4.3 List additional interfaces identified during the accomplishment of this SAI.	

SAI SECTION 4 − INTERFACES ATTRIBUTE −Drop Down Menu
1. No interfaces specified.
2. The following interfaces not identified within the Certificate Holder's manual system:
3. Interfaces listed are inaccurate.
4. Specific location of interfaces not identified within the manual system.
5. Other

SAI SECTION 5 − MANAGEMENT RESPONSIBILITY & AUTHORITY ATTRIBUTE	
Objective: The questions in this section of the data collection tool address the responsibility and authority of the process. They are designed to assist the inspector in determining if there is a clearly identifiable, qualified and knowledgeable person who is responsible for the process, is answerable for the quality of the process and has the authority to establish and modify the process. (The person with the authority may or may not be the person with the responsibility.)	
Tasks	
To meet this objective, the inspector must accomplish the following tasks:	
1. Identify the person who has overall responsibility for the Extended Range Operations with Two−Engine Airplanes (ETOPS) program.	
2. Identify the person who has overall authority for the Extended Range Operations with Two−Engine Airplanes (ETOPS) program.	
3. Review the duties and responsibilities of the person(s), documented in the Certificate Holder's manual.	
4. Review the appropriate organizational chart.	
Questions	
To meet this objective, the inspector must answer the following questions:	
5. Are the following aspects of the Management Responsibility and Authority Attributes addressed in the Extended Range Operations with Two−Engine Airplanes (ETOPS) program:	
5.1 Does the Certificate Holder's manual clearly identify who is responsible for the quality of the Extended Range Operations with Two−Engine Airplanes (ETOPS) program?	☐ Yes ☐ No, Explain Name/Title:
5.2 Does the Certificate Holder's manual clearly identify who has authority to establish and modify the policies, procedures, instructions and information for the Extended Range Operations with Two−Engine Airplanes (ETOPS) program?	☐ Yes ☐ No, Explain Name/Title:
5.3 Does the Certificate Holder's manual include the duties and responsibilities of those who manage the work required by the Extended Range Operations with Two−Engine Airplanes (ETOPS) program? SRRs: 121.135(b)(2)	☐ Yes ☐ No, Explain
5.4 Does the Certificate Holder's manual include instructions and information for those who manage the work required by the Extended Range Operations with Two−Engine Airplanes (ETOPS) program? SRRs: 121.135(a)(1)	☐ Yes ☐ No, Explain
5.5 Does the Certificate Holder's manual clearly and completely document the authority for this position?	☐ Yes ☐ No, Explain
5.6 Does the Certificate Holder's manual clearly and completely document their qualification standards for the person having responsibility for the Extended Range Operations with Two−Engine Airplanes (ETOPS) program?	☐ Yes ☐ No, Explain
5.7 Does the Certificate Holder's manual clearly and completely document their qualification standards for the person having authority to establish and modify the Certificate Holder's policies, procedures, instructions and	☐ Yes ☐ No, Explain

	information for the Extended Range Operations with Two−Engine Airplanes (ETOPS) program?	
5.8	Does the Certificate Holder's manual clearly and completely document the procedures for delegation of authority for the Extended Range Operations with Two−Engine Airplanes (ETOPS) program?	☐ Yes ☐ No, Explain

SAI SECTION 5 − MANAGEMENT RESPONSIBILITY & AUTHORITY ATTRIBUTE −Drop Down Menu
1. Not documented.
2. Documentation unclear.
3. Documentation incomplete.
4. Other.